

Appl. No. 10/709,652
Amdt. Dated 01/04/2006
Reply to Office action of November 29, 2005
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-9 were previously canceled.

Cancel claims 10, 15, 16, 18.

Amend the remaining claims, as follows.

10. (canceled) ~~A method of forming a spacer for a gate electrode of a transistor comprising the steps:~~

~~depositing a dielectric material;~~
~~etching the dielectric material to form a spacer;~~
~~forming pores in the dielectric material; and~~
~~depositing a thin layer over the porous dielectric material.~~

11. (previously presented) A method of forming a spacer for a gate electrode of a transistor comprising the steps:

depositing a dielectric material;
etching the dielectric material to form a spacer;
forming pores in the dielectric material; and
depositing a thin layer over the porous dielectric material;
wherein:
the spacer is made porous by exposing the spacers to an oxygen plasma.

12. (previously presented) A method of forming a spacer for a gate electrode of a transistor comprising the steps:

depositing a dielectric material;
etching the dielectric material to form a spacer;
forming pores in the dielectric material; and
depositing a thin layer over the porous dielectric material;
wherein:
the spacer comprises organic material; and
the spacer is made porous by removing the organic material.

13. (currently amended) The method, according to claim ~~10~~ 12, wherein:
the spacer comprises a Si-O-C-N type of low-k material.

14. (previously presented) A method of forming a spacer for a gate electrode of a transistor comprising the steps:

depositing a dielectric material;
etching the dielectric material to form a spacer;

Appl. No. 10/709,652

Amdt. Dated 01/04/2006

Reply to Office action of November 29, 2005

forming pores in the dielectric material; and

depositing a thin layer over the porous dielectric material;

wherinc:

the pores are formed during the spacer etch, rather than during deposition of the dielectric material.

15. (canceled) ~~The method, according to claim 10, wherein the spacer has a reduced dielectric constant (k).~~

16. (canceled) ~~The method, according to claim 15, wherein the reduced dielectric constant (k) is less than 3.85.~~

17. (previously presented) A method of forming a spacer for a gate electrode of a transistor comprising the steps:

depositing a dielectric material;

etching the dielectric material to form a spacer;

forming pores in the dielectric material; and

depositing a thin layer over the porous dielectric material;

wherein the spacer has a reduced dielectric constant (k);

wherein the reduced dielectric constant (k) is less than 7.0, but greater than 3.85.

18. (canceled) ~~The method, according to claim 15, wherein the spacer is porous, and further comprising depositing a thin layer on the spacer to prevent moisture absorption.~~

19. (currently amended) The method, according to claim ~~10~~ 11, wherein the thin layer comprises oxide.

20. (currently amended) The method, according to claim ~~10~~ 11, wherein the thin layer has a thickness of less than 5nm.

21. (previously presented) The method, according to claim 11, wherein:
the spacer comprises a Si-O-C-N type of low-k material.

22. (previously presented) The method, according to claim 14, wherein:
the spacer comprises a Si-O-C-N type of low-k material.

23. (previously presented) The method, according to claim 17, wherein:
the spacer comprises a Si-O-C-N type of low-k material.

24. (previously presented) The method, according to claim 11, wherein:
the spacer has a reduced dielectric constant (k); and
the reduced dielectric constant (k) is less than 3.85.

25. (previously presented) The method, according to claim 14, wherein:

Appl. No. 10/709,652

Amndt. Dated 01/04/2006

Reply to Office action of November 29, 2005

the spacer has a reduced dielectric constant (k); and
the reduced dielectric constant (k) is less than 3.85.

26. (currently amended) The method, according to claim 17 12, wherein:
the spacer has a reduced dielectric constant (k); and
the reduced dielectric constant (k) is less than 3.85.
27. (previously presented) The method, according to claim 11, wherein the thin layer comprises a material selected from the group consisting of oxide, amorphous silicon and nitride.
28. (previously presented) The method, according to claim 14, wherein the thin layer comprises a material selected from the group consisting of oxide, amorphous silicon and nitride.
29. (previously presented) The method, according to claim 17, wherein the thin layer comprises a material selected from the group consisting of oxide, amorphous silicon and nitride.

Please enter the following:

- 30. (new) The method, according to claim 12, wherein the thin layer comprises a material selected from the group consisting of oxide, amorphous silicon and nitride. --
- 31. (new) The method, according to claim 12, wherein the thin layer has a thickness of less than 5nm. --
- 32. (new) The method, according to claim 17, wherein the thin layer comprises a material selected from the group consisting of oxide, amorphous silicon and nitride. --
- 33. (new) The method, according to claim 14, wherein the thin layer has a thickness of less than 5nm. --